

## CLAIMS

1. A semiconductor production apparatus including a process chamber; a wafer support disposed within said process chamber for supporting a semiconductor wafer; and a heating source for heat treatment of the semiconductor wafer supported by said wafer support;

wherein said wafer support comprises a susceptor having an upper surface for mounting said semiconductor wafer thereon, and a susceptor support shaft for supporting said susceptor from thereunder; wherein said susceptor support shaft having a main shaft positioned substantially coaxial with a center of said susceptor, and at least three arms radially extending from an upper end of said main shaft, each said arm having a distal end provided with a protrusion directed toward said susceptor; and wherein a peripheral portion of a lower surface of said susceptor being formed with (depressions), each said (depression) having an inside diameter substantially identical to an outside diameter of said protrusion, adapted to engage said protrusion.

2. A semiconductor production apparatus according to claim 1, wherein said heating source is disposed under said susceptor.

3. A semiconductor production apparatus

09807902.043001

Sub  
A  
7  
2  
0  
7Sub  
A  
7  
2  
0  
7Sub  
A  
7  
2  
0  
7

according to claim 1 or 2, wherein said depression has an elongated form extending in a radial direction of said susceptor.

5 4. A semiconductor production apparatus according to claim 3, wherein (said protrusion) is engaged in (said depression) on the outermost peripheral side thereof at ambient temperature (when) said susceptor has a coefficient of thermal expansion greater than that of said susceptor support shaft.)

10 5. A semiconductor production apparatus according to claim 1, wherein said susceptor comprises (carbon graphite).

15 6. A semiconductor production apparatus according to claim 1, wherein said susceptor comprises (carbon graphite) having a surface coated with silicon carbide.

20 7. A semiconductor production apparatus according to claim 1, wherein said susceptor comprises silicon carbide.

8. A semiconductor production apparatus according to claim 1, wherein said susceptor support shaft comprises silica glass.

25 9. A semiconductor production apparatus according to claim 1, wherein said process chamber comprises an inlet for a process gas, and an outlet

for letting out the gas from said process chamber.

10. A semiconductor production apparatus according to claim 9, wherein said process gas is a gas for carrying out an epitaxial growth process.

5 11. A semiconductor production apparatus according to claim 1, wherein said arm inclines upward as said arm extends radially outward.

Sub  
B3  
D1

Add  
B4

09807902.041901